Attention: Dockets Office, MS-4, docket@energy.ca.gov
California Energy Commission

From: Tenaya Asan, tasan@jps.net
Asan Construction and Consulting

Regarding: Docket No. 12-EBP-1
Comprehensive Energy Efficiency Program for Existing Buildings Draft Action Plan

To: The Commissioners and CEC and CPUC Staff

The Comprehensive Energy Efficiency Program for Existing Buildings Draft Action Plan demonstrates extensive research, stakeholder engagement and assimilation of information performed by the CEC and CPUC staff and I personally thank the staff for such a diligent effort.

My comments are related to the section of the Plan entitled Energy Efficiency in Property Valuation and consider the importance of coordination with national organizations and standards in this effort. I have come to understanding through several years of involvement in initiatives aimed at capturing the value of green and energy efficient homes, which, for context, I will summarize briefly.

In the past several years, I have been engaged in initiatives to bring energy efficiency valuation into green home sale process. Within the ARRA funding cycle, and in my position at Build It Green, I was responsible for retaining professional to complete the Los Angeles appraisal needed for the information cited at the bottom of page 57 of the Action Plan document. I was also instrumental in encouraging the Nils Kok study cited as footnote #93 at the bottom of page 57 and for providing home data needed for the study. Prior to both those studies, we also retained appraisal professionals to evaluate three Los Angeles County homes that participated in the Home Energy Upgrade Contest. This effort helped to develop an acceptable appraisal process for green appraisers without the traditional approach of comparable homes and resulted in similar evaluations of 6 – 9% predicted premium.

At the national level, I and other California representatives participated in a DOE BBP funded Roundtable that convened many national agencies and organizations involved in financing and valuation to discuss energy efficiency valuation of existing homes, to share knowledge, emerging practices and discuss the strategies for furthering the initiative. Ongoing communication among the organizations has continued and has resulted in some of the initiatives listed below.

Finally, in a two year period, I was instrumental in developing and delivering training to real estate professionals, including appraisers; training over 300 professionals statewide. The development required ongoing stakeholder input from financing, real estate and appraisal professionals. I also engaged in efforts locally to influence MLS organizations towards “greening” their input fields.

There were many lessons learned from this work, but one that I would like to highlight in these comments is that unlike other sections of the plan, valuation and green financing requires coordination

at a national level. Local industry players are often subject to and/or participatory in national standards, tools and resources. As such, there are national organizations stepping to the table to address issues of valuation for energy efficiency, with tools and resources both comprehensive and flexible to accommodate local markets. If we are to shift financing and appraiser industry standards of practice, coordinating with such national efforts is important, if not critical to California's success and should be incorporated into the Action Plan.

I have received permission and attached a DRAFT white paper "Unlocking the Value of the Energy Efficient Home" by CNT Energy in Chicago who has been instrumental, along with the National Home Performance Council, for many efforts of coordination, education and development of tools and resources for energy efficient valuations. The white paper details many of those efforts and the importance for industry evolution. To facilitate the assimilation of such information, I have summarized some of those key efforts below.

Appraisal Institute Green and Energy Efficiency Addendum - The Appraisal Institute had developed a Green and Energy Efficiency Addendum that allows for an appraiser to capture information about the green performance aspects of a home. This Addendum is not required but can be requested for use by the home seller. Some new home developers building high performance homes are now engaging appraisers in the use of this tool.

RESO Green Data Dictionary - Supporting the Appraisal Institute's efforts is The Real Estate Standards Organization (RESO) Data Dictionary intended to standardize and ensure data integrity of fields and look-ups (enumerations) in the multiple listing services. Use of the data dictionary has been made mandatory by the National Realtor Association and includes ten fields specifically related to high performance homes.

BPI Home Performance Completion Certificate - One of other example of national efforts which will help pave the way for energy efficiency valuation is a development of a BPI Home Performance Completion Certificate, initiated by CNT Energy and the National Home Performance Council. This certificate can provide a consistent means to record home energy upgrades completed on an existing home. The Home Performance XML (HPXML) standard defines data collection (BPI-2100) and data transfer (BPI-2200) standards for home energy upgrades. It includes input fields for recognized rating system data, solar information as well as many energy efficiency and green prescriptive features recognized in the RESO Data Dictionary and the Appraisal Institute Green & Energy Efficiency Addendum.

The certificate standard is based on the HPXML data elements and applies these standards specifically in an MLS- and appraisal-friendly way to facilitate the resale or refinancing of these homes.

The certificate standard is in final draft stage pending approval as a BPI and ANSI standard. The standard is to be implemented locally to create a specific certificate that best suits the needs of the local market.

I encourage the California Energy Commission to review in full the accompanying Draft white paper "Unlocking the Value of the Energy Efficient Home" and to incorporate actions into their Comprehensive

Energy Efficiency Program for Existing Buildings Draft Action Plan that leverage national efforts for valuation of energy efficient and green homes. I believe the tools and resources in development do not conflict, but rather can enhance efforts being made at our state level. Financing and appraisal industry standards must work hand in hand and shifts to incorporate green and energy efficiency standards can be accomplished in California with the help of efforts by national organizations and agencies.

Respectfully submitted,

Tenaya Asan

DRAFT

Unlocking the Value of the Energy Efficient Home: A Blueprint to Make Energy Efficiency Improvements Visible

Table of Contents

About CNT Energy
CNT Energy (www.cntenergy.org) combines rigorous research with effective solutions to help consumers and communities control energy costs and become more energy efficient. CNT Energy designs and implements programs and conducts research in the areas of dynamic electricity pricing, building energy efficiency, and regional energy planning to achieve significant savings and job creation for low-income communities. CNT Energy is an affiliate of the Center for Neighborhood Technology.

About Value for High Performance Homes Campaign
As a provider of regional energy efficiency programs, CNT Energy understands that future success is dependent upon energy efficiency becoming transparent in the real estate transaction. The Value for High Performance Homes Campaign is designed to advance how energy efficiency is reflected in the real estate transaction.

For more information, please visit the Value for High Performance Homes Campaign at http://www.cntenergy.org/innovation/valuehph/ to find related news on the energy efficient real estate transaction as well as relevant tools.

About National Home Performance Council
The National Home Performance Council is a national non-profit organization created to support whole-house energy efficiency programs through research and stakeholder engagement. NHPC's board of directors includes a wide range of energy efficiency stakeholders including: state energy offices, non-profit organizations, contractors, program implementers, real estate representatives, utilities, and manufacturers. NHPC's mission is to address challenges that prevent the growth and expansion of the whole- house energy efficiency sector and communicate these solutions.

Acknowledgements
CNT Energy and the National Home Performance Council appreciate the many professionals' whose work inspired this paper. We also appreciate the many who provided content for this paper or comments. In particular we

would like to acknowledge the Value for High Performance Homes Steering Committee whose work made this paper possible.

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National Association of Home Builders – Kevin Morrow
National Association of REALTORS – Kristen Short
U.S. Green Building Council – Courtney Baker, Matt Libby

1. Executive Summary

This whitepaper was developed by CNT Energy and the National Home Performance Council. The purpose of the paper is to help energy efficiency program sponsors and other stakeholders in the home performance industry document efficiency improvements so that these features are consistently visible and fairly valued at the time an existing home is sold. The core of the paper consists of a blueprint that program sponsors and other energy efficiency organizations can use today to integrate information about improved existing homes into the real estate transaction process. The intended outcome of this blueprint is that energy efficient features that are often invisible to the naked eye become visible and can be accurately valued.

There is growing consumer demand for energy efficient homes with money-saving features. The success of energy efficiency programs in markets across the country has contributed to a growing inventory of improved existing homes. Yet, a disconnect currently exists amongst the energy efficiency program implementers, the real estate community, and the homebuyer and seller. Energy efficiency programs have not found ways to transmit consistent, standardized data about energy efficiency features to the real estate industry so that these features can be taken into account by buyers, appraisers, lenders and others during the home sales transaction.

The goal for both the energy efficiency and real estate industries is a standardized approach to sharing the data that energy efficiency programs collect on successfully implemented energy efficiency improvements. With a standardized approach, so that the parties involved in real estate transactions can use this data when energy efficient existing homes are bought and sold. Standardizing the data incorporated into the transaction process also helps establish what premium (if any) markets place on energy efficient existing homes. Knowledge of such a premium, backed by research, would help set in motion a virtuous cycle in which homeowners become more likely to invest in energy efficiency improvements because there is a clearer indication as to how much of the investment might be recaptured at the time of sale. Growing inventories of existing energy efficient homes create an opportunity for the energy efficiency and real estate industries to collaborate and help homebuyers and sellers understand the fair value for these improvements.

The blueprint which energy efficiency programs can implement right now includes the following steps:

> **Step 1 - Document energy efficiency features and improvements using consistent, standardized methods**. Energy efficiency improvements are already being documented by efficiency programs as part of programmatic work. Upon completion of improvements at an existing home, provide homeowners with a standard BPI-2101-compliant Certification of Energy Efficiency Improvements or Certificate of Home Performance that lists the improvements made to the home.
>
> **Step 2 - Ensure that that data about home energy efficiency improvements is incorporated into the appraisal process.** As standard practice, energy efficiency program sponsors should provide homeowners with a report of program data in a format that can be readily passed along to an appraiser during home

purchase or refinance. This paper outlines how this might work using an Appraisal Institute addendum which programs are authorized to complete on behalf of the homeowner and provide as a record of their work.

Step 3- Work with the MLS community to ensure that data about home energy efficiency improvements is incorporated into for-sale listings. This requires energy efficiency programs to identify local multiple listing service (MLS) providers and their vendors. The energy efficiency industry needs to understand the "green features" already available in the MLS and introduce new fields as appropriate, drawing on data elements incorporated into the required MLS industry data standard.

Step 4- Capitalize on existing high-quality continuing education and designation training offered by local REALTOR® associations, groups, and chapters to educate all professionals involved in the sale of an energy efficient home regarding energy efficiency certifications and features.

Step 5- Report on inventories of energy efficient homes to track supply. Efficiency programs have a key role to play in making sure the local real estate market understands how the inventory of existing energy efficient homes is growing, via consistent tracking of data and dissemination of efficiency trends in the local housing inventory.

Step 6 - Develop standards and IT solutions that allow quicker and more automated transfer of data. The blueprint outlined in this paper is based on the transfer of data about energy efficiency upgrades from programs to the professionals involved in the real estate sales process. A number of currently available tools and approaches, including data standards, methods for auto-populating forms and databases, and transferring program data to multiple parties, could greatly facilitate the data transfer process necessary for energy efficiency improvements to be properly valued.

This blueprint may be of interest to energy advocates, high-performance building contractors, program sponsors and administrators, utilities, architects and designers, verifiers and raters, building scientists, state energy offices, non-governmental agencies, and more. The key audience to implement this blueprint is energy efficiency programs sponsored by utilities, non-governmental agencies, state energy offices or others, and the organizations that implement these programs

The focus of this paper is the existing housing stock. To date, there has been no consistent method for documenting improvements in a way that can be reflected in the existing home sale transaction. While this paper does highlight emerging trends for improving the sales transaction for newly-built "green" or energy efficient homes, the recommendations in this paper focus on existing homes with energy efficient characteristics. However, a number of the concepts discussed in the paper also have relevance for the new home sector.

2. The Need: Demand for Energy Efficient Homes

In the spring of 2013, media reports from the Washington Post[1] and the National Association of REALTORS®[2] described growing demand for newly constructed homes with energy efficient features. Studies in California[3] and North Carolina[4] show that newly built energy efficient homes trend toward shorter sale times and/or higher prices

[1] http://www.washingtonpost.com/realestate/buyers-favor-green-houses-but-theyre-often-not-easy-to-identify-or-appraise/2013/03/20/717c4392-8ff5-11e2-9cfd-36d6c9b5d7ad_story.html
[2] http://www.realtor.com/blogs/2013/04/03/most-americans-want-eco-friendly-homes/
[3] http://www.environment.ucla.edu/news/article.asp?parentid=15325
[4] http://ncenergystar.org/resources/publications

than comparable code-built homes. A study by the National Association of Home Builders[5] found that ENERGY STAR® appliances and the ENERGY STAR® for New Homes label were ranked "very important" by 94 percent and 91 percent of new home buyers respectively, putting them both in the top five "must haves" among 120 features.

The demand for energy efficient characteristics in existing homes is growing too. The National Association of REALTORS® (NAR) annual Home Buyer/Seller Profile[6] found that 87 percent surveyed said a home's heating and cooling costs were "important" or "very important" regardless of the age of the home. This number has trended more or less the same since it was first surveyed in 2008. Costs for appliances and lighting have also ranked strongly, at about 70 percent.

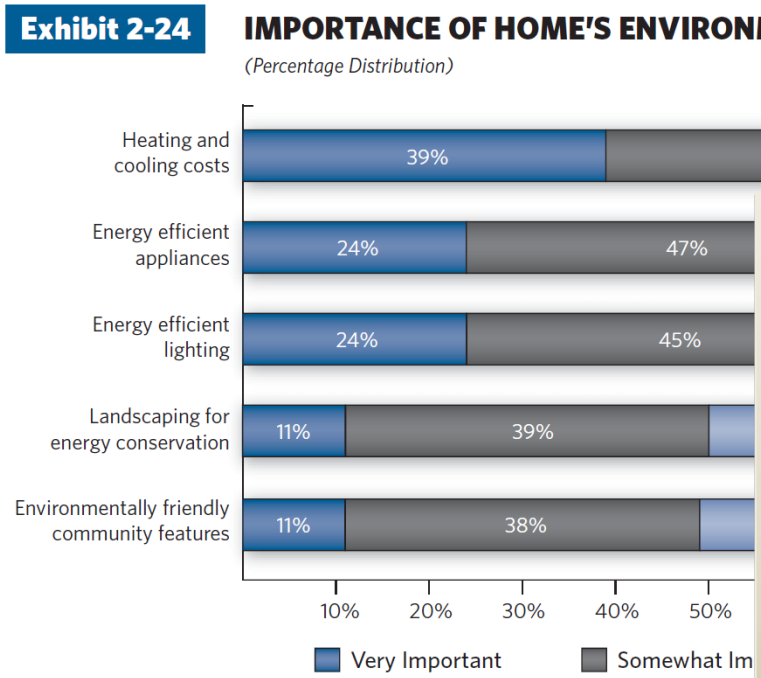


Figure 1 – Source: National Association of REALTORS®. *Profile of Home* National Association of REALTORS®.

Important Definitions

Note: The term "energy efficiency improvement" or "energy efficiency upgrade" is used throughout this paper to refer collectively to the terms below.

Energy Efficiency Measure – A project to improve a home's efficiency which is done one-at-a-time. For example, insulating the attic or updating the furnace. Also knows as Single Measure.

Whole-Home Energy Upgrade – An efficiency upgrade project that considers all the systems in a home strategically. For example, air sealing and insulating the attic while improving ventilation. Sometimes referred to a Home Energy Upgrade (HEU).

Figure 2

The energy efficiency industry has been working to supply this rapidly growing demand. Since 2009, 1.25 million existing homes have been upgraded by one or more energy efficiency improvements through programs working in partnership with the U.S. Department of Energy[7]. The Home Performance with ENERGY STAR® program, administered nationally by the U.S. Department of Energy in conjunction with the U.S. Environmental Protection Agency, is now available in 35 states[8]. The goal of the program is to help homeowners improve the efficiency and comfort of their homes using Whole-Home Energy Upgrades, while helping to protect the environment. Other existing home programs sponsor Energy Efficiency Measure improvements that focus on a particular feature of the home, such as insulation or heating system upgrades.

[5] http://www.nahb.org/generic.aspx?genericContentID=206669&channelID=311
[6] http://media.npr.org/assets/news/2013/homeowners.pdf
[7] Number provided by Kathleen Hogan, Deputy Assistant Secretary for Energy Efficiency, at ACI leadership summit including whole-home retrofits completed through Weatherization Assistance Program, Home Performance with ENERGY STAR, and Better Buildings Neighborhood Program (April 30, 2013)
[8] http://www.energystar.gov/index.cfm?fuseaction=hpwes_profiles.showFindaProgram

Historically, the real estate community has focused on client effective demand – their needs as well as their ability to pay for them – and has been wary of selling features that clients do not explicitly ask for or want. The energy efficiency industry's efforts to encourage labeling and regulations, accordingly, have been opposed by the real estate community, because these approaches put homes that are *not* energy efficient at a disadvantage.

While opposed to mandating labels and regulation, NAR[9] and the energy efficiency industry have long agreed that voluntary programs and incentives benefit consumers. The fact that consumers are showing increasing interest in energy efficiency features – also indicating that these features are growing in demand - should further help to allay the real estate community's concerns. As the real estate market rebounds and the volume of home sale transactions increases, a new opportunity is emerging for these industries to collaborate by enabling buyers and sellers of these homes to understand the fair value of efficiency investments.

However, as a result of two significant limitations, home improvements made through the auspices of energy efficiency programs are not often recognized or valued in the real estate transaction when these homes are later bought and sold. First, lack of standard methods for documenting energy efficiency upgrades means there is no easy way for buyers to find homes that often include relatively invisible features such as:

- ENERGY STAR® appliances
- Heat pumps
- High efficiency HVAC systems
- High quality insulation
- Integrated, systematic Whole-Home Energy Upgrades package of improvements such as offered through a program like Home Performance with ENERGY STAR®

Second, even if prospective buyers can find efficient homes, the market frequently fails to accurately value more efficient homes or energy efficient features, not because they have no intrinsic value, but because this value is difficult to quantify.

Energy efficiency programs that focus on home energy improvements need to address these two limitations to achieve successful integration with the real estate market. A standardized documentation methodology is an important priority for energy efficiency programs because, as described below, a certificate process could address the disadvantageous cycle some homeowners currently experience. Instead, programs can lay the groundwork for a "virtuous circle" in which homeowners are eager to pay for energy efficiency improvements because they know that they can recover some or all of the value of their investment at the time of home sale.

3. Success Measure: Contributory Value

Figure 3

Data is the key to addressing the transactional barriers that make it difficult for the market to identify and properly value energy efficient homes. Energy efficiency programs need to develop ways to transfer information about energy efficient features of existing homes to people and institutions involved in real estate transactions, including prospective buyers, real estate agents, MLS databases, appraisers, home inspectors, and others. Energy efficiency

[9] http://www.realtor.org/topics/energy-efficiency-and-climate-change "Issues Summary"

programs need to keep several key concepts in mind when collecting and disseminating this information:

- Ensure that this information is intelligible to professionals who are not expert in building science.
- Confirm that this data is standardized within markets, and beyond them, to the greatest extent possible.
- Implement strategies that will allow this data to be used to determine the value of energy efficient features.

The key points at which the information needs to enter the real estate transaction are depicted in Figure 3.

The most immediate role of this data is to make invisible home energy efficiency features *visible* at the time of the real estate transaction. Because the most important energy efficiency improvements are often sealed into the attic and behind walls, or programmed into appliances, lighting, or other systems, buyers find it hard to inspect these improvements directly, or recognize them when they see them. Real estate agents may not be familiar with or notice these features or may not know how to verify them. The most important aspects of home performance – including safety, comfort, energy efficiency, durability, and environmental impact – are literally invisible during key steps of any home sale or refinance transaction.

Documentation is the best tool to make invisible energy efficiency features visible to homeowners. In the new home sector, builders can arrange to have the homes that they build certified to indicate that they meet highly regarded standards, such as those established by the U.S. Green Building Council's LEED program, or the U.S. Department of Energy's ENERGY STAR® programs. These certifications communicate clear, consistent, and trust-worthy information – for example, that the home has received a LEED Silver or a specific HERS rating – and the claims can be inspected by home buyers and real estate agents.

Energy efficiency programs that support improvements in existing homes could benefit from adopting a similar approach. The Home Performance with ENERGY STAR® program, which provides support to homeowners who want to improve their home's energy efficiency through a comprehensive, whole-house upgrade, is exploring one approach to documentation for existing homes. Home Performance with ENERGY STAR® is implemented by local or state-level sponsors who agree to follow national guidelines issued by the U.S. Department of Energy (DOE); some of these sponsors issue certificates to homeowners who have upgraded their homes, and DOE provides some guidance for a certificate template. The Building Performance Institute Standard BPI-2101 builds off these efforts by providing a standardized set of data fields that can be reported in a certificate format. The primary benefit of using the BPI-2101 for energy efficiency programs is that it makes information easy to transfer to other parties in the real estate transaction process, as detailed later in this paper. BPI-2101 can be used to communicate information about Energy Efficiency Measures, single actions such as heat pumps, duct sealing, or high-performing insulation, as well as Whole-Home Energy Upgrades.

The immediate benefit of documentation for the real estate transaction is that it allows buyers to make informed choices. As discussed above, many buyers have a strong interest in purchasing an energy efficient home. Documentation such as a BPI-2101-compliant certificate or information about single-measure improvements would enable buyers to locate homes that are efficient or have specific energy efficient features. Information that is useful to buyers also benefits professionals including appraisers, underwriters, and real estate agents.

A second benefit of documentation is that it makes the appraisal process easier. Appraisers cannot consider attributing value to energy efficiency unless they have information about energy efficient features. Documentation provides an important method for getting information to appraisers so that they can take into account the contributions that energy efficiency improvements – from air sealing and attic insulation, to heat pumps or high-efficiency boilers – may make to a home's overall value.

Over the longer term, data is crucial because it allows energy efficiency improvements to be valued. In theory, the evidence that buyers want energy efficient homes suggests that they are willing to pay a premium for these features. The technical term for this premium is "contributory value." Contributory value is defined by the

Dictionary of Real Estate Appraisal as the change in the value of a property as a whole, whether positive or negative, resulting from the addition or deletion of a property component[10].

Sandra Adomatis, SRA and LEED GA, a leading appraiser of energy efficient homes, describes contributory value as: *[T]he amount the market is willing to pay for a given feature. It is not always equal to cost and is often defined as the cost less all forms of depreciation.*

For example, a swimming pool costs $35,000, but after one year the house sells for only $10,000 more than a similar house without a pool. Therefore, the contributory value of the pool is $35,000 minus $25,000 in loss from all forms (physical depreciation and functional obsolescence) for a contributory value of $10,000 based on market support or paired sales.

Clear identification of the positive contributory value of energy efficient features, or energy efficiency premium, is crucial because it could drive a tremendous increase in residential energy efficiency by demonstrating to the buyer and other participants in the real estate transaction that improvements can "pay for themselves," in part or in whole, through an incremental increase in the home's resale value. Once research consistently demonstrates the contributory value of energy efficiency characteristics, and a critical mass of homeowners have confidence that energy efficiency improvements add value, a virtuous cycle is set in motion in which homeowners upgrade the energy efficiency of their existing home because they believe that they can recapture the value of their improvements at time of sale.

The energy efficiency industry can look to the green residential building sector for signs of this virtuous cycle. The transaction process for sales of new green homes is beginning to follow the process outlined in Figure 3. The green home construction industry has established a process for documenting homes that makes improvements visible to the various professionals involved in the sales transaction. From builder to listing agent to buyer's agent to lender and underwriter to appraiser, the certified high-performance upgrades of the property that affect value are starting to be passed along, in the form of established documentation processes such as the U.S. Green Building Council's LEED for Homes program, and in the form of established fields in many MLSs and on standard appraiser worksheets.

As a result, the data points to early evidence of the contributory value of building homes to specific energy efficient standards. For example, a 2012 UCLA study *The Value of Green Labels in the California Housing Mark*et[11] finds a 9 percent contributory value for green-labeled homes. NCEEA's *ENERGY STAR Market Impact Study* in North Carolina finds that ENERGY STAR® new homes sold for a $5,500 premium, 90 days sooner[12]. NAR's Green REsource Council provides a sample of trend reports using MLS data in a few markets that also may show a premium sales price or shorter marketing period.[13]

In short, to ensure that buyers can find energy efficient homes, and to ensure that these homes are properly valued, energy efficiency programs need to incorporate data into the real estate transaction. A blueprint describing how to do this is the subject of the next section.

4. The Blueprint: Tools

The blueprint recommended in this paper is based upon three transaction tools:

[10] Source: Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 5th ed. (Chicago: Appraisal Institute, 2010).
[11] http://www.environment.ucla.edu/news/article.asp?parentid=15325
[12] http://ncenergystar.org/resources/publications
[13] Source: National Association of REALTORS®: www.greenresourcecouncil.org/research.cfm. Accessed June 17, 2013.

- Real Estate Transaction Standard and Green MLS Implementation Guide
- Appraisal Institute Residential Green & Energy Efficiency Addendum
- Building or Home Improvement Verification

These tools, if implemented together for both new and existing homes, in a consistent fashion in markets around the country, would result in more accurate valuation of energy efficient homes and home characteristics.

The Real Estate Transaction Standard and Green MLS Implementation Guide

In any given market, the multiple listing service, or MLS, allows real estate agents to add or search available homes for sale. The majority of homes sold are via an MLS; according to the National Association of REALTORS®2012 Home Buyers and Sellers Profile[14], only nine percent of homes sold in 2012 were sold directly by the owner, and therefore *not* listed on an MLS. Thus, it is critical for the energy efficiency industry to understand how homes are listed in the MLS, as these systems constitute the primary marketplace where homes that have completed improvements through energy efficiency programs will be listed for sale.

The MLS industry is large, decentralized, and complex. Over 850 MLS operate in different markets around the country. Each has different governance models and field offerings. More than ten major MLS system vendors provide database, programming and/or hosting services to this industry with hundreds more providing niche services.

The core of any MLS service offering is to make high-quality data on homes for sale available so real estate brokers can work together to match homebuyers and sellers in a sales transaction. Given the complexity of the industry and the core mission of high-quality data, the industry has collaborated on data standards to facilitate the transfer of data between MLS, technology vendors, data aggregators, and others vital players.

The Real Estate Standards Organization (RESO) is the entity that manages and maintains the industry's technology standard. RESO is responsible for both the data transfer standard, known as the Real Estate Transaction Standard or RETS, and the data collection standard, known as the RETS Data Dictionary. RESO and its standards allow for consistent and accurate information across the industry.

Energy efficiency programs have an interest in consistent and accurate data about energy efficiency improvements, and much like the MLS industry, programs have a compatible interest in seeing that this information is reflected consistently and accurately during a real estate transaction. Therefore, knowledge of RETS data transfer standard and the RETS Data Dictionary can help energy efficiency programs advance the goal of making energy efficiency improvements visible during a real estate transaction.

Figure 4 – Courtesy of RESO

The RETS data transfer standard facilitates communication of high-quality data across the real estate industry. RETS allows different parties with different technology systems to transfer data sets consistently. NAR has required that MLSs migrate to RETS-compliant fields beginning in 2009[15]. RESO recently announced a compliance program so that MLSs and software vendors can confirm and promote their compliance to RETS data transfer standard as tested by a third-party.

The RETS Data Dictionary provides a set of national standard terms for use in MLS databases. The Data Dictionary definitions and guidelines for data fields serve as a "common ground" for systems that comply with RETS, and as a point of reference for those that do not.

[14] http://media.npr.org/assets/news/2013/homeowners.pdf
[15] https://www.flexmls.com/blog/new-nar-mls-policy/

Consistency of data fields and data transfer creates many opportunities for partners to work together to improve the industry. For example, many MLSs use RETS to make their listings available on websites like Realtor.com. Or, some vendors that aggregate county tax assessor records use RETS to auto-populate related MLS fields for tax rates or square footage.

One important characteristic of the RETS data transfer standard and the RETS Data Dictionary is that they define a universe of data elements, but leave the choice of which data elements to use to individual MLSs.

A second important characteristic of these standards is that they are updated periodically through a collective process involving input from multiple stakeholders, resulting in different versions of the standard. The data dictionaries and each version of RETS data transfer standard are slightly different, as a result of additions, subtractions, and changes to data elements that reflect larger market changes. As a result, the capacity of a given MLS to store information about energy efficiency in its database and to display it in listings can vary considerably.

Three factors determine an MLS's ability to capture and communicate energy efficiency-related data:

1) Whether or not the MLS is RETS-compliant
2) Which version of RETS[16] the MLS uses
3) Which of the available energy efficient fields the MLS chooses to implement

Regardless of version implemented, following the RETS data transfer and Data Dictionary standards creates a universal language all energy efficiency programs and real estate professionals can understand and use to communicate effectively.

The first RESO Data Dictionary was released in 2012 and included four fields dedicated to green or efficiency program documentation[17]. (See Figure 5.)

In summer 2013, a resource with an additional level of detail about these four fields as well as over 40 additional efficiency-related fields will be published by NAR's Green REsource Council[18]. This implementation guide is a first-of-its-kind resource for MLS and vendor technology staff responsible for implementing fields and related drop-down values or "enumerations". The guide will take the Data Dictionary down to an additional level of detail, further defining Green MLS fields as well as relevant enumerations.

RETS GreenMLS Fields: Certifications

Green Certifying Body – For Example: USGBC

Green Certification Program – For Example: LEED

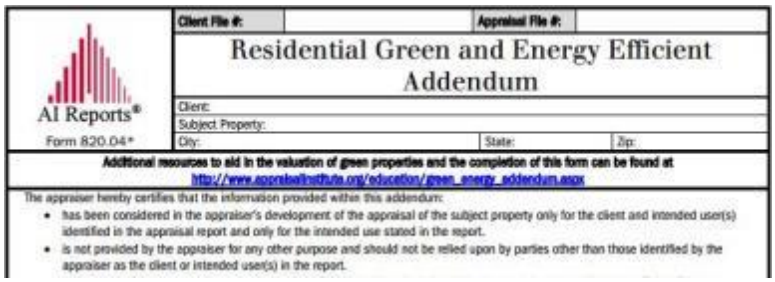
Green Rating (if applicable) – For Example: Gold

Year Certified – For Example: 2013

Figure 5

The Implementation Guide will be a resource for efficiency programs, too. The guide will help programs understand these fields in RETS Data Dictionary so they can report energy efficient characteristics in a manner consistent with a typical MLS listing. In other words, the RETS-defined efficiency-related fields offer a way to bring consistency to communications between everyone involved in the energy efficient home transaction. As shown in Figure 3, these fields facilitate communication about energy efficiency between contractors and homeowners, listing agents, buyer's agents, lenders, underwriters, and appraisers.

[16] As of the printing date for this whitepaper, the most current versions are RETS v1.8 (data transfer) and RETS Data Dictionary v1.1 (data collection).
[17] http://www.prweb.com/releases/2012/5/prweb9496321.htm
[18] http://www.greenresourcecouncil.org/


Client File #: Appraisal File #:

Residential Green and Energy Efficient Addendum

AI Reports®
Form 820.04*

Client:
Subject Property:
City: State: Zip:

Additional resources to aid in the valuation of green properties and the completion of this form can be found at
http://www.appraisalinstitute.org/education/green_energy_addendum.aspx

The appraiser hereby certifies that the information provided within this addendum:

- has been considered in the appraiser's development of the appraisal of the subject property only for the client and intended user(s) identified in the appraisal report and only for the intended use stated in the report.
- is not provided by the appraiser for any other purpose and should not be relied upon by parties other than those identified by the appraiser as the client or intended user(s) in the report.

Figure 6 – ©2013__ Reprinted with permission from the Appraisal Institute, Chicago, Illinois. All Rights Reserved

The Appraisal Institute Residential Green & Energy Efficiency Addendum

Much as RETS provides an access point for efficiency programs to the home sale transaction, the Appraisal Institute Residential Green & Energy Efficiency Addendum (G&EEA) creates an important opportunity for the same programs to inform the appraisal process. The G&EEA is an optional form appraisers can use as a worksheet to identify energy efficiency improvements, renewables, and other "green" characteristics, and to help make an accurate assessment of the value of energy efficient and green homes. This Addendum is meant to accompany the Uniform Residential Appraisal Report (Form 1004), which does not have sufficient space to capture details about energy efficient homes. With the version 2.0 release of the Addendum in spring 2013, the Appraisal Institute confirmed that the G&EEA Addendum can be completed by contractors or program implementers; that is, whoever has primary information on energy efficiency improvements and features[19].

The Addendum captures high performance property details in a thorough and consistent way, allowing a clean transfer of data from energy efficiency programs to appraisers. Appraisers can use this data to inform their "opinion of value" for the property. In the case of existing homes that have received energy efficiency upgrades, there may be a significant lag time between the completion of the upgrade and the time that the home is appraised, whether for a mortgage refinancing or a home sale process. Therefore, efficiency programs have a key role to play not just in reporting work complete in an appraiser-friendly format , but also in emphasizing to homeowners just how vital it is to save this report and ensure it is included with other key mortgage paperwork, such as tax records.

Building or Home Improvement Verification

As mentioned above, the green building industry has provided leadership around building verification. This helps make the energy efficient and other "green" features of these homes transparent during a *new* home sale. As a result, it is becoming possible to measure a contributory value for these features.

Compare this to the existing housing stock. To date, there has not been a consistent way to record home energy improvements completed in an existing home. The result is that MLS administrators are wary about deploying fields related to energy efficiency in MLS systems. Real estate agents are wary of including these upgrades in listings due to potential liability risks and the fear of "greenwashing," a term that describes marketing language used to make a product or service seem environmentally friendly, even if it is not.

The Building Performance Institute (BPI) is leading the way to make home energy efficiency more MLS- and appraiser-friendly through the creation of a new national standard. *BPI-2101-S-2013 - Standard Requirements for a Certificate of Completion for Whole-House Energy Efficiency Upgrades* defines a standard way to describe energy efficiency improvements in an existing home. The certificate may include a label or indication of energy consumption, in which case it is called "Certificate of Performance". Otherwise, it is called a "Certificate of Energy Efficiency Improvements". The BPI standard does not dictate the appearance of the certificate, which can be designed to meet the requirements and tastes of the local market. The standard is currently scheduled to be approved by BPI in the late summer or early fall of 2013.

BPI-2101 was designed partly to standardize the flow of information into real estate transactions by providing a common vocabulary that would allow the many energy efficiency programs across the U.S. to describe energy

[19] http://www.appraisalinstitute.org/newsadvocacy/news/2013/Appraisal-Institute-Releases-Enhanced-Form-to-Help-Real-Estate-Appraisers-Analyze-Green-Features-03-07-13.aspx

efficiency improvements in the same way. Use of a national standard will support comparability and enable research on the benefits of residential energy upgrades.

The real potential for BPI-2101 to promote more accurate valuation of energy efficiency, however, is the way it has been designed to facilitate the transfer of data from contractors and programs to real estate agents, appraisers, and MLS systems, thereby making the invisible visible. The data elements in BPI-2101 are drawn from another BPI standard (BPI-2200) that serves as a data dictionary for the home performance industry. A companion BPI standard (BPI-2100, or HPXML) defines XML schemas that allow this data to be communicated among a wide range of parties.

HP ★ XML
Home Performance XML
Figure 7

The data elements in BPI-2101 are also aligned with the data in elements in the RETS Data Dictionary and the AI Residential Green and Energy Efficient Addendum. As a result, it is relatively simple to transfer the information describing a home energy efficiency upgrade contained in a BPI-2101-compliant certificate to an MLS system that collects data about energy efficient features, and/or to a PDF or database that contains the fields from the AI addendum. In practical terms, this means that energy efficiency programs could set up systems that would automatically feed nationally standardized data on home energy upgrades to databases and systems that can be accessed by real estate agents and appraisers.

Figure 8

Taken alone, each of these tools makes residential energy efficiency improvements more transparent to the real estate market. Together, these tools provide even greater impact. At the national level, these tools have been aligned in their design and create the quality and trust needed to enable a better transaction process for energy efficient homes.

5. The Blueprint: Immediate Steps for the Energy Efficiency Industry

CNT Energy and the National Home Performance Council have carefully mapped out the tools and processes energy efficiency programs must implement and coordinate to ensure that improvements made on existing homes are transparent during the sales transaction.

Figure 9

Step 1 – Document the Efficiency Improvements. Collect data regarding energy efficiency improvements in homes that can be reported to the homeowner through a BPI-2101-compliant certificate (either a Certificate of Efficiency Improvements or a Certificate of Home Performance). Ensure that the program's quality assurance process is sufficient to

protect the integrity of the information being verified and to limit programs' exposure from unnecessary liability.

Step 2 – Issue Program Data in AI Green & Energy Efficiency Addendum report format. The data elements listed in BPI-2101 for standard Certificate of Efficiency Improvements or Certificate of Home Performance has been mapped to reflect the same set of fields as the AI Residential Green & Energy Efficiency Addendum. The Addendum clearly specifies that efficiency programs can be cited as the source for completing this Addendum[20]. (See Figure 10.) As a standard practice, energy efficiency programs can complete the Addendum on behalf of the homeowner and provide it as a record of their project in the Addendum format. The Addendum can be provided to homeowners to be passed along to their lender at the time of refinancing or reselling the home. The presence of this Addendum may actually change the qualification requirements of the appraiser assigned to do the valuation, as described in Section 7 below.

NHPC and several energy efficiency programs are currently exploring how the HPXML data transfer standard might be used to automatically report program data into the Addendum format.

"The objective of this Addendum is to standardize the communication of the high performing features of residential properties. Identifying the features not found on the 1004 form provides a basis for comparable selection and analysis of the features. ***Builders, contractors, homeowners, and third party verifiers are encouraged to complete this Addendum and present to appraisers****, agents, lenders, and homeowners."*

(Emphasis added)

Figure 10

Step 3 – Encourage MLS systems to develop the capacity to capture information on energy efficiency improvements. Work with the local real estate community to determine the most efficient way to incorporate data about energy efficiency characteristics into MLS listings. The first step may involve identifying the vendor that provides the software platform used by the local MLS. (See list of major MLS vendors in Figure 12.) As discussed above, several successive versions of RETS have been developed, and not all MLS and their vendors use the most current version, so it is important for a program to know which vendor serves an MLS. The current version of RETS used by an MLS determines which energy efficiency-related fields may be available or implemented. Another step is to understand the MLS's established update cycles for minor changes and major upgrades, which may include migration to the latest version of RETS.

Both to encourage consistency and to reduce design efforts, programs can use the RETS Data Dictionary as a starting point when advocating for energy efficiency-related fields. Programs can use the Green MLS Implementation Guide described in Section 5 to work with local MLS committees/staff to verify the appropriate drop-down values for available fields and to work within the MLS existing software update timeframes to introduce new fields and drop-down values as appropriate. An MLS's leadership committee, technical staff, or a RETS manager, if one is assigned,

[20] http://www.appraisalinstitute.org/education/downloads/ai-residential-green-energy-effecient-addendum.pdf see boxes at bottom of page 1 and page 4.

are key contacts, as well as real estate agents with specialized green training such as NAR Green[21] or EcoBroker[22].

Step 4 – Educate the Professionals. Inclusion of information about energy efficiency into an MLS database is a necessary but not sufficient condition for properly valuing energy efficient homes. The information is useless unless it is understood and properly used by the parties to a real estate transaction. As shown in the Figure 3 above, many professionals are involved in the sale of an energy efficient home, from the contractor and program implementer, to the real estate agent, lender, underwriter, and appraiser. Ideally, each of these parties should understand and be able to explain the energy efficient features and characteristics included in an MLS listing.

Particularly for real estate agents and appraisers, local REALTOR® associations[23], certification organizations[24] and Appraisal Institute chapters[25] provide high-quality continuing education and designation training that prepares these professionals to work with specialized energy efficient homes. These groups often seek support from the energy efficiency industry to market the trainings, provide physical education space, or assist with tuition grants so more professionals can attend. As such, energy efficiency programs can offer a valuable partnership and contribute to accessible, quality training in the local market.

Also, most states license real estate agents and appraisers. For the most part, continuing education for these professionals is not simply for professional development but clearly regulated and required to maintain licensure. Therefore, it is important to know who licenses real estate agents and appraisers in a given state, and what the renewal requirements are. Some states relicense professionals on a rolling basis according to individual licensing renewal anniversaries, while others renew all the licensed professionals in a category together every two to three years. Many companies specializing in licensing education offer electives on energy efficiency. Programs interested in encouraging education on energy efficiency should understand renewal cycles, the quality of continuing education already approved by the state, and licensing requirements to provide continuing education if education gaps exist.

Once programs understand the licensing requirements or trends that drive the pursuit of voluntary education, it is possible to work with real estate educators in your area to deliver appropriate and effective training that will fill seats. Topics might range from building trends and building science to proper use of Green MLS fields.

Step 5 – Report inventories, track supply. Efficiency programs have a key role to play in making sure the local real estate market understands the growth of the existing energy efficient home inventory. MLSs need a solid business case before they will commit to implementing and releasing fields. They need to understand how many homes will utilize a given field. If usage will be low, they are less likely to implement fields. Niche fields do not get released.

[21] http://www.greenresourcecouncil.org/find_an_nar_green_designee.cfm
[22] http://www.ecobroker.com/search/findeb.aspx
[23] http://www.greenresourcecouncil.org/courses.cfm
[24] http://www.ecobroker.com/eb/curriculum.aspx
[25] http://www.appraisalinstitute.org/education/green/default.aspx

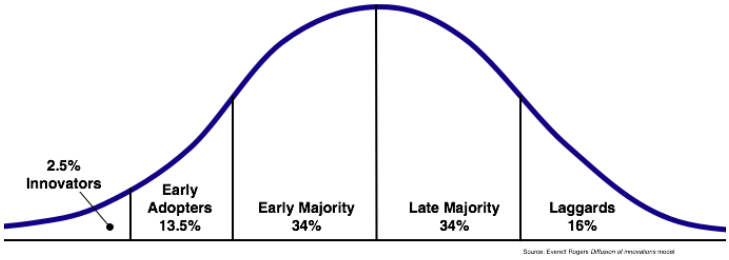


Figure 11 – Stephanie – Could include a graphic like this if it helps.

For valuation, when the inventory of efficient homes represents near or below 20 percent of the market, these homes may receive a premium at resale or refinancing, if they are carefully documented. When these homes represent 50 percent of the market, energy efficient home sales will be easily compared with other recent sales and a premium will become much more visible in the market. As the inventory tips over 50 percent of the market, the homes without efficiency improvements will sell for less because they are considered "non-conforming" compared to the overall inventory of homes. Both appraisers and real estate agents need data to confirm the inventory of energy efficient homes in the local market and how these general benchmarks apply.

Likewise, efficiency programs should look for opportunities to advance high-quality, impartial research studies that may help identify the local contributory value for energy efficiency improvements. Studies designed based on what appraisers need provide more credible results for use in the valuation process. Such studies done with the involvement of real estate appraisers, appraisal chapters, or REALTOR® associations using MLS data are useful for this purpose. Hedonic modeling methods are not. Local colleges and universities may be a good partner to facilitate research that can be most widely utilized for local valuations.

Step 6 – Develop standards and IT solutions that allow quicker and more automated transfer of data. The blueprint outlined in this paper is based on the transfer of data about energy efficiency upgrades from programs to entities and professionals involved in the real estate sales process. Although each program could develop its own strategy for communicating data to the local MLS and appraisers, the process of incorporating energy efficiency data into real estate transactions will take years or decades to implement if the industry relies on one-off strategies.

National data transfer standards, such as BPI-2100 (HPXML), should be used whenever possible, both to reduce the costs of developing data transfer systems and to facilitate collection and aggregation of comparable data from multiple sources.

Methods for auto-populating MLS databases and the AI Addendum should also be explored. APIs could be developed that would allow data to be transferred from programs to multiple sources – MLS databases, real estate data repositories, and sites that allow automatic generation of the AI Addendum. .

These systems would provide a more effective means of getting information into the marketplace than reliance on homeowners to remember and locate physical certificates. These systems also have the additional benefit of allowing energy efficiency data to be accessed at any time. Privacy concerns would clearly have to be addressed to allow this system to work, but given the amount and nature of real estate data already available, these concerns should not be impossible to address.

6. The Blueprint: Immediate Steps for State Energy Offices and Regional Energy Efficiency Organizations

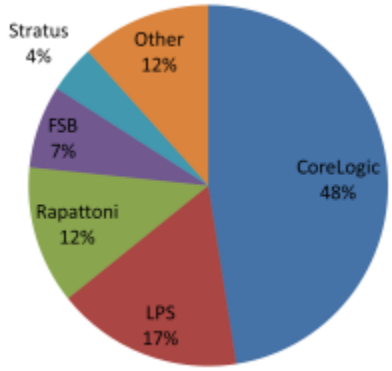
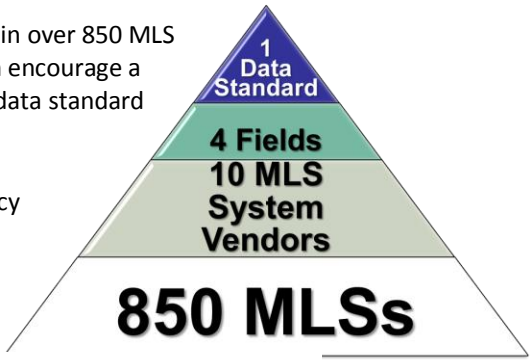


Figure 12

This blueprint for the energy efficiency industry creates a straightforward path for important changes in the short-term to create a free market for energy efficient homes. However, regional energy efficiency organizations and state energy offices have an opportunity to create even bigger change, in more places, and to make the process faster overall.

Regional energy efficiency organizations and state energy offices are in a unique position to coordinate both certificate programs and MLS design by working with MLSs that share the same vendor MLS systems across the region. The Green MLS Implementation Guide was created with vendor MLS systems specifically in mind. While there are over 850 MLSs covering the country, less than ten software companies provide database, programming and/or hosting services.[26] (See Figure 11.) Only a small number – around 10 percent – of MLSs develop their own software in-house.

The process to date and the action steps above assume market-by-market progress in over 850 MLS areas. However, regional energy efficiency organizations or state energy offices can encourage a more coordinated path as shown in Figure 12. Here's the equation to get from one data standard to 850 MLS.



- Use **one data standard** – RETS data transfer standard
- To implement a minimum of **four documentation fields** for energy efficiency certificates in an MLS (See Figure 5):
    - Green Certifying Body
    - Green Certification Program
    - Green Rating (if applicable)
    - Year Certified
- Through the **ten MLS system vendors** (See Figure 11)
- That serve **850 MLSs**

This approach dramatically increases scale while significantly holds down costs and time to implement. By implementing fields already in the RETS Data Dictionary, individual design costs are reduced as well. This creates an opportunity for MLSs, energy efficiency programs, and organizations to shift budget where it is critically needed: toward communication and training for those involved in the transaction, rather than on software design and implementation.

[26] For insights into industry segments, market leaders and their positioning see Clarity *12th Annual MLS Customer Satisfaction Survey* - http://www.callclareity.com/12th-Annual-MLS-Customer-Satisfaction-Survey.pdf

Case Study – Statewide Example: The Colorado Energy Office pioneered the work of regional MLS design back in 2009[1]. The effort has resulted in implementation of a common set of green fields in 18 MLSs across the state. (The effort pre-dates current tools including high-performance fields in RETS Data Dictionary, the AI Addendum and the BPI certificate of completion.) Because of project's resulting scale and consistency, an investment was also possible in training on new fields for MLS users.

CEO has worked with key partners throughout the state including MLS and REALTOR associations; Colorado Coalition of Appraisers (CCA) and the Colorado Chapter of the Appraisal Institute (AI); the three largest home inspection organizations in the state; lenders, underwriters, and related professional organizations, and builders and the Colorado Chapter of USGBC.

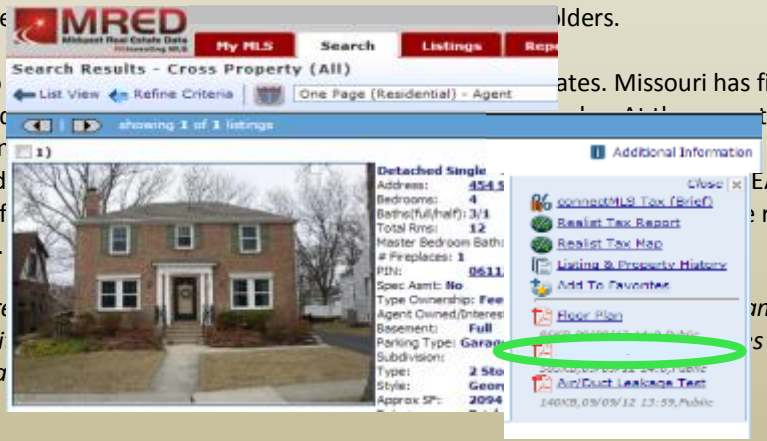
The case study still serves as an example of the outstanding benefits of state- or region-wide cooperation on transaction design.

The benefits for this scale of coordination are even greater today due to the comprehensive set of available tools described in Section 4 of this paper, which have already been designed to be compatible.

See case study for more information:
https://www.naseo.org/Data/Sites/1/documents/committees/buildings/calls/2013-06-13-colorado.pdf

Case Study – Regional Organization Example:
Working through one of the six Regional Energy Efficiency Organizations (REEO's) can be a successful approach to organizing real estate data across multiple states. In 2012, the Midwest Energy Efficiency Alliance (MEEA) http://www.mwalliance.org/ introduced a state-wide energy efficiency project record certification as part of the Illinois Home Performance with ENERGY STAR® Program (IHP) http://www.illinoishomeperformance.org/. More than 800 homes have been awarded Illinois Home Performance certificates to date. Homes which have received an IHP certificate can be searched specifically via the Midwest Real Estate Data (MRED) green data fields http://www.mredllc.com/comms/mredgreenroom.asp. This MLS serves over 40,000 users in the Chicago metro region, and adopted these green information fields in early 2012.

Expanding its Illinois program, MEEA began to work with Missouri home performance stakeholders in 2013 to introduce a state-wide, Missouri Home Energy Certification program. The design is based on many of the same BPI-2101 and RETS-compliant fields as had been included in Illinois. Instead of starting from scratch, MEEA facilitated the State of Missouri process to design a certificate procedure that was suitable to fit within the existing MLS data standard. At the same time, it the process incorporated the ne olders.



MEEA continues to ates. Missouri has five key MLSs that share one vend time, Illinois has six MLS's beyor Home Performance, but d EA continues to ensure energy ef real estate industry regionally.

Instead of 14 differe nges to the MLS can engage wi s broad access to a robust certifica

7. Conclusion

Real progress is happening. CNT Energy and the National Home Performance Council have laid a foundation to promote the home energy upgrade process, implement standards in the MLS industry, develop consistent methods for incorporating consideration of energy efficiency into the appraisal process, and begin to understand the constraints of underwriting.

Now, the energy efficiency industry and the real estate community need to collaborate, both locally and at a national level.

A focused effort by energy efficiency programs and coordination amongst regional energy efficiency organizations will accelerate the reality of an improved real estate transaction for existing energy efficient homes.

Immediacy is key. Energy efficiency programs have upgraded an unprecedented number of existing homes, fueled by the Department of Energy's Better Buildings Neighborhood Program grants and other initiatives. Many leading real estate economists predict that the housing market has hit bottom, including Goldman Sachs Group and Zillow[27]. The volume of transactions will grow as the market rebounds. The time is now for energy efficiency programs to collaborate with real estate partners to create an infrastructure that makes efficiency improvements to existing homes transparent in the real estate transaction.

The role of the energy efficiency industry is to increase the number of existing energy efficient homes in the marketplace. But, energy efficient organizations and programs also need to develop strategies to communicate information about these homes to the marketplace, and to support training that will allow real estate professionals to understand and use this information during the sales process so that the value of the energy efficient home is no longer questioned or misunderstood.

The goal for both the energy efficiency and real estate industry is to develop methods that ensure that the upgraded features of new and existing energy efficient homes are fully visible during a real estate transaction. The responsibility for the first step lies with the energy efficiency industry, as most of the data required for a transparent transaction is already being captured by energy efficiency programs. Standardizing the information about efficiency improvements makes these upgrades visible and accessible during a real estate transaction. This enables buyers and sellers to come together in an informed market and makes any contributory value for energy efficiency improvements visible. As a premium emerges, this will encourage homeowners to invest in these improvements, because they understand what chance they have for capturing the value improvements at the time of sale.

Through collaboration, the energy efficiency industry and real estate community can ensure that energy efficiency investments are properly valued at the time of the transaction.

The blueprint presented in this whitepaper outlines the first steps toward establishing this cycle. The energy efficiency industry needs to consistently document energy efficiency improvements, work with the real estate community to reflect these improvements in local for-sale listings, capitalize on existing education and training opportunities, report on the growing inventories of energy efficient homes, and encourage further advancement of data standards.

[27] http://www.forbes.com/sites/morganbrennan/2012/01/10/has-the-housing-market-hit-a-bottom/

By implementing this blueprint in markets across the country, energy efficiency programs will move together down a standard path where the contributory value of energy efficiency improvements is visible, triggering a virtuous cycle that will increase the number of existing energy efficient homes across the U.S.

Appendix – Sample Appraisal Institute Green & Energy Efficiency Addendum

<<Thumbnail or reprint here - http://www.appraisalinstitute.org/education/downloads/ai-residential-green-energy-effecient-addendum.pdf>>

8. Using the Blueprint to Create Lasting Change: Appraiser Assignment and Underwriting Guidelines

This supplemental section is included to provide context on larger issues that impact the sales transaction of the existing energy efficient home. It also speaks to the larger, beneficial changes that can be expected from the transaction tools outlined in this paper.

While the three integrated tools (Real Estate Transaction Standard/Green MLS Implementation Guide, Appraisal Institute Residential Green & Energy Efficiency Addendum, and BPI- 2101 - Standard Requirements for a Certificate of Completion for Whole-House Energy Efficiency Upgrades) create immediate improvements, they also offer a pathway to advancement by addressing complex and root-cause problems.

If used extensively, the Addendum may specifically influence how appraisers are assigned to "energy efficient" jobs, as well as underwriting guidelines for energy efficient homes.

How appraisers are assigned to energy efficient jobs

One major correction following the housing crash of 2007 was the implementation of the Home Valuation Code of Conduct (HVCC) in 2009. Fannie Mae and Freddie Mac implemented the HVCC and as part of their seller/servicer guidelines to firmly establish appraisal independence requirements for loan sellers to the secondary market. The HVCC strictly prohibited mortgage brokers, loan officers, and real estate agents – who have a vested interest in the transaction – from ordering appraisals to avoid coercion of appraisers.

In 2010, the Dodd–Frank Wall Street Reform and Consumer Protection Act further clarified HVCC and emphasized

Important Definitions/Acronyms

Appraisal Management Company (AMC)* - AMC's have contracts with companies (such as lenders) that require appraisal services; AMCs act as agents to hire the appraiser and provide other valuation services

Credible Appraisal* – A credible appraisal is one that is worthy of belief; A credible appraisal provides support, by relevant evidence and logic, for the opinion of value

Government Sponsored Entity (GSE) – Financial entities like Fannie Mae and Freddie Mac that securitize mortgages and issue mortgage-backed securities

Federal Housing Finance Agency (FHFA) – Agency created in 2008 and responsible for overseeing vital components of the secondary mortgage markets, including Fannie Mae, Freddie Mac, and the Federal Home Loan Banks

Home Valuation Code of Conduct (HVCC) – Legislation effective in 2009 which introduced greater independence in the appraisal process

Lender – The client and initiator of an appraisal when it is required for residential financing

Licensed and Certified Appraisers* – Appraisers are licensed and certified by the state appraiser regulatory agencies, after meeting minimum education, experience and examination requirements….established by … The Appraisal Foundation

Underwriter – Term used (sometimes interchangeably) to describe the process of determining the risk in issuing financing for a specific borrower under set conditions. The term can refer to an individual employed by a lender to assess risk. Can also refer to a lender that is initiating a mortgage. Finally, may refer to GSEs and the secondary mortgage market that issue their own underwriting guidelines which mortgage originators may choose to follow.

Uniform Standards of Professional Appraisal Practice (USPAP)* - Minimum performance standards for appraisal practice in the United States, as authorized by Congress and published by The Appraisal Foundation

*Definition provided by Appraisal Foundation's "A Guide to Understanding a Residential Appraisal"

**Additional background from Appraisal Institute's "Understanding the Appraisal"

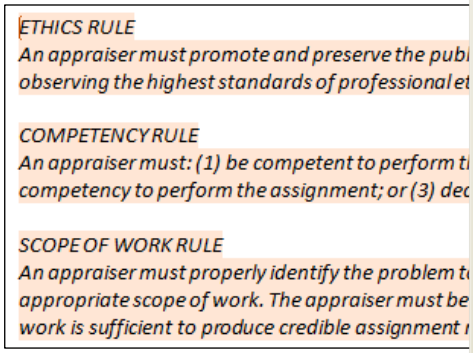
Figure 13

the importance of appraisal independence.

The improvements in appraisal independence have brought some unintended consequences. Where before, most residential appraisals were ordered by mortgage brokers, following the implementation of the Act, loan sellers have elected to order a sizable percentage of residential appraisal assignments through appraisal management companies, or AMCs. AMCs are third party brokers of appraisals. These firms offer appraisal order and review functions. A common complaint of residential real estate appraisers is that many AMCs focus on criteria such as lowest cost or quickest turnaround time of the appraisal over such factors as the complexity of the assignment or the qualifications of the appraiser. Such procurement models would deemphasize the extra diligence required to thoroughly analyze most high-performance properties.

These regulations have particularly harmful yet unintended consequences for energy efficient homes. In introducing a clearinghouse for appraisers, AMCs have created a market that values pricing rather than the quality of the appraisal. In practice, the lowest fee and quickest turnaround becomes the most important factor in matching appraisers to assignments. Moreover, state-based licensing has fragmented the field, resulting in 50 approaches to how AMCs are monitored. Just as energy efficient home practices were gaining strength, appraisers stopped being rewarded for these niche competencies and the mechanism to match appraisers qualified to evaluate energy efficient homes was eliminated.

However, the Uniform Standards of Professional Appraisal Practice (USPAP) set the minimum standards for appraisers and they define competency requirements in order to complete appraisal assignments. USPAP defines that appraisers must be competent for the assignments they accept. If an appraiser is offered an assignment for which he or she does not already have competence, USPAP defines the process to obtain needed competency prior to completion of an appraisal and requires that it be stated in the report. This has not been changed following either HVCC or Dodd-Frank.


ETHICS RULE
An appraiser must promote and preserve the pub
observing the highest standards of professional e

COMPETENCY RULE
An appraiser must: (1) be competent to perform t
competency to perform the assignment; or (3) dec

SCOPE OF WORK RULE
An appraiser must properly identify the problem t
appropriate scope of work. The appraiser must be
work is sufficient to produce credible assignment

Figure 14

Government Sponsored Enterprises (GSEs) including Fannie Mae[28] and Freddie Mac, and all secondary mortgage market lenders under FHFA, have a higher standard than USPAP and require that an appraiser have competency prior to accepting the assignment. These standards make originating lenders responsible for hiring competent appraisers[29]. Even if a lender uses an AMC to order appraisals, the lender is still responsible for hiring competent ones. Unfortunately, this requirement does not seem to be upheld currently due to a lack of oversight.

It is important for anyone working with energy efficient homes to understand the push and pull for this segment when it comes to assigning appraisers to

A Note on New Homes

For new high-performance homes, an appraisal is usually imminent – typically to finalize construction financing on custom homes or as part of builder-to-homeowner transfer of spec homes.

Builders can clear hurdles for the transaction by specifying appraiser requirements in the sales contract. For example:

"This Home is being built to nationally recognized standards above prevailing code with unique features, materials and high-efficient equipment. The Lender shall choose an Appraiser educated and knowledgeable in valuating this type of specialized Home, preferably an appraiser who holds a professional appraisal designation that requires advanced education on such issues as the valuation of sustainable buildings. The appraiser shall provide verification of this advanced education from a qualified educational provider to be permitted to conduct the appraisal for this project."

[28] https://www.fanniemae.com/content/guide/sel011713.pdf - page 518 and http://www.harriscompanyrec.com/fanniemae_appraisal_standards.pdf

[29] https://www.fanniemae.com/content/guide/sel011713.pdf - page 519

jobs. The huge asset of mandated competency competes with a current emphasis on using AMCs to assign appraisers to jobs amid a focus on low cost/quickest turnaround over competency.

The bright light in a poorly designed market is the Residential Green & Energy Efficiency Addendum. Widespread use of the Addendum at the conclusion of every project will change how appraisers are assigned to energy efficient home jobs. Currently, the first signal that an unqualified appraiser has been assigned to a job is when the submitted appraisal report is reviewed. Only after all the work has been filed does the consumer notice that similar energy efficient homes were not used, or notable features were ignored, or both. At that point the consumer's typical recourse is to accept the sub-par results or pay out-of-pocket for a brand-new appraisal.

The biggest opportunity will come as builders, contractors, and real estate agents learn that inclusion of the Addendum when loan or refinancing paperwork is initiated can act as a trigger to assign an appraiser with significant competency for energy efficient homes. As such, the Addendum should align with the sales contract or appraisal order that is submitted to a lender.

The Vermont Green Homes Alliance (VGHA) is a collaborative of state trade groups including builders, mortgage bankers, appraisers, Realtors and MLSs. They provide a leading example of how the appraiser assignment process can be recalibrated to better ensure a competency match. VGHA is working through the trade organizations to map out a process where a completed Green & Energy Efficiency Addendum will act as a trigger for assigning the right appraiser.

How energy efficiency programs can use the blueprint to create lasting change. Efficiency programs can facilitate wider recognition of the Green & Energy Efficiency Addendum as a valuation tool by beginning to report program data in the Addendum format. Efficiency programs or contractors must aggressively communicate the importance of the Addendum report when reselling the home or refinancing in the future.

Underwriting Guidelines for Energy Efficient Homes

Another role where the Green & Energy Efficiency Addendum may influence the course of the energy efficient home transaction is with underwriting. While the Addendum is not currently a mandated form, its prevalent use could influence future requirements.

Stories emerging from the field paint a picture where underwriters are tightly time-constrained and might spend ten minutes or less reviewing each file associated with a home for sale and financing. The underwriter role involves identifying collateral risk for the lender. Anything that falls outside the reviewer's checklist receives a rigorous review and can be removed from the paperwork if it is not easily understood and strongly justified. While major financing entities like Fannie, Freddie, FHA, and VA guidelines allow for energy efficient adjustments if the market data supports the value, it appears in practice today that underwriters do not acknowledge this. The value-add for these improvements are often backed out and ignored.

When prefilled copies of the Addendum are offered at scale, they would become more familiar to underwriters and the associated files would have a better chance of being accepted with their documented valuations on a case-by-case basis.

Another benefit of widespread use of the Addendum is that ongoing feedback of its increased role and frequency of use will help make the case to FHFA and others that updated guidelines are needed.

How energy efficiency programs can use the blueprint to create lasting change. Efficiency programs must work with members to incorporate the prefilled Green & Energy Efficiency Addendum with every sales contract. Efficiency programs or contractors must aggressively communicate the importance of the prefilled Addendum when refinancing or reselling the home in the future.